



JPL Case No.: C-16984
CIT Case No.: 1917
Attorney Docket No.: JPL 87-008

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GROUP 230

237
#13
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : Group Art Unit: 237
Larry A. Bergman :
Entitled: OPTICALLY INTRACONNECTED: Examiner: K. Kriess
COMPUTER EMPLOYING DYNAMICALLY :
RECONFIGURABLE HOLOGRAPHIC :
ELEMENT :
Serial No.: 07/103,192 :
Filed: October 1, 1987 :

RESPONSE

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

In response to the Office Action dated May 21, 1991,
applicant hereby responds as follows.

The invention is directed to an improvement in computers/processors (for example, the type of processor embodied in the Intel 80486 micro-processor). Such micro-processors include, among other things, "custom" logic elements in addition to memory elements. The concept of the present invention is to select "on the fly" those random logic elements which are the most efficient in performing a particular instruction. This of course requires that the connection among the custom logic elements be reconfigurable on the fly to enable such a selection.

For this purpose, the preferred embodiment of the invention employs optical elements to reconfigure the random logic elements in accordance with the selections made. (In the preferred embodiment of the invention, speed is enhanced by using the vertical dimension of the VLSI chip for